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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/059,533	04/13/98	HAUCK J	042390.P5379

EXAMINER
TORRES, J

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No.	Applicant(s)	
	09/059,533	HAUCK ET AL.	
	Examiner	Art Unit	
	Joseph D. Torres	2133	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 April 2001* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15)☒ Notice of References Cited (PTO-892)
16)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
17)☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
18)☐ Interview Summary (PTO-413) Paper No(s). _____ .
19)☐ Notice of Informal Patent Application (PTO-152)
20)☐ Other: .

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims 1-11 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 2, 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over IEEE 1394 standard for a High Performance Serial Bus and the IEEE 1394A enhancements to IEEE 1394 (see, for example, "IEEE Standard for a High Performance Serial Bus", IEEE Std. 1394, published by IEEE Inc., New York, NY, 1996) in view of Mattaway et al. (US 6185184 B1, hereafter referred to as Mattaway).

Note: In the following, the "IEEE Standard for a High Performance Serial Bus", IEEE Std. 1394-1995, published by IEEE Inc., New York, NY, 1996, will be referred to as Reference 1.

Reference 1 teaches a specification for a high-speed high-performance serial bus (see Abstract, Reference 1). The IEEE standard provides flexible support for two-way communication over a high performance serial bus that allows up to 16 physical connections between any two devices (page 1, Section 1.1, Reference 1). Figure 7-3 (see Section 7.3.5.1, page 188, Reference 1) depicts "an inbound primary packet from

another node", i.e., a source node, and the reaction of the transaction layer to a busy acknowledge, i.e., a "NAK". Sections 7.3.5.1.1 to 7.3.5.1.4, Reference 1, describe transaction layer operations in detail. Especially note; on page 190, Section 7.3.5.1.4, Reference 1, during the Transition OSR1:OSR1 operation, the transaction layer chooses not to re-queue the pending retry. See also Sections 7.3.5.2.2 and 7.3.5.2.4 Page 192-197, Reference 1, for more details especially noting the Transition ODR2:ODR0b operation on page 197. See Section 8.2.2, page 201, Reference 1, for discussion of BANDWIDTH_AVAILABLE register. Note: On Page 7, Lines 5-10 of the applicant's disclosure, the applicant describes the process of aborting packet transmission as follows: Upon sending a NAK, "the destination node asserts its arbitration request", aborts the transmission of a packet, that "the packet must be sent later" and "the remaining packet time may be reclaimed". On page 31, 3.6.2.4, Reference 1 states "an acknowledge code is used by the destination node to notify the sending node that it is busy" (i.e. a NAK, see applicant's disclosure, page 5, lines 8-10). Furthermore, sources using "dual-phase" retry shall retry the subaction during every four fairness intervals (page 31, 3.6.2.4, paragraph 5, Reference 1). Fairness intervals are arbitration reset gaps to give each competing source, using the fairness protocol, an opportunity to use the bandwidth for transmission/reception (page 14, definition of "fairness interval", Reference 1). Essentially, there is no difference between aborting transmission to send it at a later time and providing a fairness gap.
However Reference 1 does not explicitly teach aborting the transmission without sending all of the primary packets.

Mattaway, in an analogous art, teaches an <INFO ABORT> packet to either prevent transmission of any <INFO> packets or to stop transmission of any remaining packets (column 26, lines30-35, Mattaway). The Examiner would like to point out that a primary packet is packet made up of sub-actions or sub-packets (page 31, 3.6.2.4, paragraph 5, Reference 1), a primary packet being one message block. Terminating the transmission of a group of packets that make up a particular message block without sending the remaining packets is no different than terminating a particular primary packet at a particular sub-action or sub-packet with out sending the remaining sub-actions or sub-packets that make up the primary packet.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Reference 1 with the teachings of Mattaway by including an additional step of aborting the transmission without sending all of the primary packets. This modification would have been obvious to one of ordinary skill in the art, at the time of the invention, because one of ordinary skill in the art at the time of the invention would have recognized that aborting the transmission without sending all of the primary packets would provide the opportunity to abort in the case of an excessively large amount of data (column 19, lines 60-67, Mattaway).

Claims 3 and 6-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over IEEE 1394 standard for a High Performance Serial Bus and the IEEE 1394A enhancements to IEEE 1394 (see, for example, "IEEE Standard for a High Performance Serial Bus", IEEE Std. 1394, published by IEEE Inc., New York, NY, 1996) in view of Mattaway (US 6185184 B1).

Reference 1 and Mattaway teach the additional limitations of claim 3. See Section 3.6.4, page 32, Reference 1. During Isochronous arbitration, services can be provided "by giving the highest priority access to a cycle master that maintains a common clock source", i.e., the root in a cable environment and the node with the highest possible arbitration number in a backplane environment.

Reference 1 and Mattaway teach the additional limitations of claim 6. If the transaction retry limit is exceeded during the Transition OSR1:OSR1 operation, the transaction fails and is timed out (Section 7.2.2, page 176, Reference 1). See, also Section 3.6.2.4, Retries, page 31, Reference 1, for details.

Reference 1 and Mattaway teach the additional limitations of claim 7. Section 3.7.3.1.1 and 3.7.3.1.2, pages 38 and 39, Reference 1, present a typical tree-topology. Also, see comments to Claim 3 rejection above.

Reference 1 and Mattaway teach the additional limitations of claim 8. See Figure 7.3 page 188, Reference 1.

Reference 1 and Mattaway teach the additional limitations of claim 9. Figure 4-25, 7-3 and 7-5, pages 107, 188 and 191, respectively, of Reference 1, depict state machines for generating a NAK in response to a primary packet. In addition, a transceiver is an inherent part of any communications systems, in order to connect the information source to the channel and/or to connect the channel with the information user.

Reference 1 and Mattaway teach the additional limitations of claim 10. See Figure 7.3 page 188, Reference 1.

Reference 1 and Mattaway teach the additional limitations of claim 11. See comments to rejection to Claims 1, 2, 4 and 5, above.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Steely et al. (US 61548160 teach a Flow Control signal used to stop transmission of packet data by the coupled global port. High Speed Serial Interface Protocol, IBM Technical Disclosure Bulletin, December 1991, US, VOLUME NUMBER: 34, ISSUE NUMBER: 7A, PAGE NUMBER: 355 – 365, PUBLICATION-DATE: December 1, 1991 teaches an STP frame (Stop transmission), the STP frame used by the destination and sent in place of an ACK reply frame, to inform the source that the destination apparatus wants the current transfer to be terminated. Ogawa et al. (US 6208653) teach a pseudo ACK packet to stop the transmission of a TCP data gram received from a first LAN to the congested VC, the ACK packet indicating that the receiving terminal cannot receive the data. Meltzer et al. (US 4712214) teach a NACK packet 01000011 ASCII "C", to cancel current transmission altogether used to abort an ongoing transmission and 01010011 ASCII "S", stop the transmission, no more is coming and ignore all the packets in the current set, the application should not process those packets. DERWENT-ACC-NO: 1990-049380, DERWENT-WEEK: 199007, 1999, teaches a communication terminal equipment for token-access local area network - has device for sending token to abort transmission when transmission NAK response is received.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph D. Torres whose telephone number is 703-308-7066. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on (703)305-9595. The fax phone numbers for the organization where this application or proceeding is assigned are (703)305-3718 for regular communications and (703)305-3718 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900

Joseph D. Torres, Ph.D.
Art Unit 2133
June 19, 2001

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